

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES
OFFICE OF PROJECT MANAGEMENT AND PERMITTING

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January 30, 2009

Mr. Tim Davies
Manager, Environmental and Regulatory Affairs
Redfern Resources Ltd.
Suite 800 - 1281 West Georgia Street
Vancouver BC V6E 3J7
Canada

VIA EMAIL

Dear Tim:

Accompanying this letter are additional State of Alaska information requests regarding Redfern Resources Ltd's. Taku River barging proposal. These requests are from the Alaska Department of Fish and Game, Division of Habitat (ADFG-DOH) and the Alaska Department of Natural Resources, Division of Mining, Land and Water (ADNR-DMLW). As we've discussed previously, these information requests are related to the ADFG-DOH and ADNR-DMLW permits and answers are not required for the Alaska Coastal Management Program consistency review.

If you have any questions, please contact me at your convenience.

Sincerely,



Tom Crafford
Mining Coordinator

Cc: Ed Fogels, ADNR-OPMP
Wyn Menefee, ADNR-DMLW
David Kelley, ADNR-DMLW
Erin Allee, ADNR-DCOM
Jackie Timothy, ADFG-DOH
Jim Anderson, ADNR-DMLW
Fern Wager, BC-EAO

Kerry Howard, ADFG-DOH
Kate Kanouse, ADFG-DOH
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Tom Atkinson, ADNR-DCOM
Andrea Meyer, ADNR-OPMP
Garry Alexander, BC-EAO

"Develop, Conserve, and Enhance Natural Resources for Present and Future Alaskans."

ADFG-DOH & ADNR-DMLW Information Requests
Redfern Resources Ltd. - Taku River Barging Proposal

ADFG

1. What is the position description, qualifications and employment term of the Environmental Monitor (EM)? Will the EM be onboard every trip on the river? ADF&G will require Redfern to submit a copy of the EM's report to ADF&G within two weeks following the last day of the reporting month.
2. If the river tug encounters large woody debris (LWD) that poses an "unavoidable navigational hazard," Redfern proposes to remove the LWD from the river. Please describe in detail the processes Redfern will consider before removing LWD (i.e. alternate navigation route), and the protocol Redfern would follow to remove the LWD.
3. The Taku River Fish Habitat Mapping document is incomplete. Please update the document to include:
 - i. Label the entire mainstem as "rearing/migration zone". ADF&G staff has identified the entire mainstem as important rearing and migration habitat for chinook, sockeye, and coho salmon;
 - ii. Identify the block type shown in Maps 1-5 as it is not included in the Legend;
 - iii. Inferred eulachon spawning areas; and
 - iv. Steelhead telemetry data downstream of the US/Canada border.
4. Regarding the Wake Induced Juvenile Stranding monitoring plan:
 - i. Please describe the methods to monitor juvenile fish stranded on shore as a result of the ACB transitioning from water to land; and
 - ii. Please provide a copy of the 2008 field study report.
5. Regarding the Wake Induced Turbidity of Clear Water Fish Habitat monitoring plan:
 - i. Under data collection, please record the exact barge and river velocity, and to what accuracy will the monitor estimate barge distance from a given location?
 - ii. Please add a monitoring location at the mouth of Fish Creek as the creek provides important habitat for fish year-round.

6. Where is the control site for the Wake Induced Bank Erosion monitoring plan? This information would be helpful for ADF&G's review of the proposed monitoring plan, but is not required to satisfy this request for information.
7. Regarding the Canyon Island Salmon monitoring plan:
 - i. Include recording species of the fish observed;
 - ii. Include how many observers will be monitoring at a given time; and
 - iii. Rather than observing weekly throughout the aquatic operating season, ADF&G recommends focusing monitoring efforts to only when adult salmon are present.
8. Regarding the Winter Open Lead Crossings monitoring plan:
 - i. Under "Fish Effects and Other", please include documenting juvenile fish stranded on the ice;
 - ii. Please include a protocol for sampling juvenile fish at several crossing locations downstream of the US/Canada border during the non-aquatic operating season to document juvenile fish use. Select monitoring locations based on a variety of habitat types found in the open water leads; and
 - iii. Under "Turbidity Effects", include sampling for turbidity before, during and after every shallow open-lead crossing, safety permitting. Sampling frequency will be determined based on observed effects.
9. Section 3.2.1 of the Wildlife Monitoring Plan defines wildlife incidents to include situations where the animal is harmed, the person is harmed, the person is threatened, or where significant damage occurs. To adequately record and mitigate potential effects on wildlife transit through incident reporting, please also include wildlife disturbance in the definition of wildlife incident (i.e. when wildlife flee from the ACB or are chased down the route for a period of time).
10. Section 3.2.1 of the Wildlife Monitoring Plan indicates that thresholds for wildlife incidents are provided in Appendix B. This appendix only includes thresholds for mortalities. Please also include thresholds for disturbance (i.e. mitigation measures such as increasing the number of pushouts if operational vehicles are routinely chasing wildlife down, off or away from packed snow routes).
11. In July 2008, Gartner Lee Limited documented four western toad breeding ponds within the active floodplain of the east channel around Canyon Island. One of these breeding ponds is within the route Redfern proposes to transport the ACB when flow levels are less than 23,000 ft^3/s , which generally occurs through late-May, during the period when western toads may breed and their eggs hatch. ADF&G will not allow the ACB system to transit through any of the documented breeding ponds, therefore, please propose an alternate route during this flow period. Because western toads do

not breed in the same location every year, Redfern will need to conduct annual ground-based amphibian surveys in early to mid-May, prior to aquatic operation commencement, for at least the first three years of operation to document all breeding areas within the proposed routes. The three other ponds lie adjacent to the route, however emerging metamorph toadlets could be within the travel route while transiting to winter habitats in the fall. Please describe how Redfern will avoid amphibian congregations that may occur on the ACB route, and provide a new protocol for monitoring throughout the summer season to assure that transiting toadlets are not subject to heavy mortality from ACB operations. Monitoring toads from the ACB, as Redfern proposes in Section 3.2.1 of the Wildlife Monitoring Plan, is not practical.

12. Please add a column to the Tulsequah Chief-Wildlife Log for “Daylight” with observation categories reflecting a narrow range of possible daylight conditions.

ADNR

- 1) Avoiding Grounding and Operational Hazards
 - a) How do you plan to account for timing of the tides when relying on the tide for assist to navigate on the river, particularly during the non-aquatic season?
 - b) What do you plan to do if there is not enough time to complete transit through the shallows or a transfer before the tide turns?
 - c) How much contingency time is allotted for tidal assist to accommodate unforeseen delays and retain opportunity to avoid stranding or grounding due to a falling tide?
 - d) What tide levels are necessary at various flow rates to avoid disturbance of the substrate by the shallow draft tug?
 - e) When going downstream in a following tail wind how will the shallow draft tug control the ACB and maintain control of it without being over taken by it?
 - i) If the tug is to experience a mechanical and/or control failure at this time where will the system end up?
 - ii) Could public access be blocked?
 - f) If two or more of the four hover motors fail, will the ACB remain stable, level and maneuverable?
 - i) What operational limitations would result?

2) Ice Condition Clarification

- a) Near the bottom of page 62 the Plan of Operations states that the “Height of the ice surface above river level is typically less than 1 ft ...” Yet Table 7 (page 49) indicates that when ice is less than or equal to 12 inches you will maintain aquatic operations in the mainstem, and avoid thin ice shelves along the sides of the river channel. Taken together, these statements seem to infer operations will typically occur in the mainstem because 12 inches of ice constitute thin ice shelves. Is this true?
- b) Please explain your evaluation for operating during the winter over river ice when it appears the ice is “typically” less than your threshold 12” thickness for operation.
- c) At what ice thickness, or height of ice surface above river level, will special measures, such as ice modification, be necessary to transfer the barge from water to ice and ice to water?
- d) Please explain plans for alleviating affects of ice dams that may result from ATs or the ACB breaking ice, which could cause river flow to back up and cause flooding or other hydrological changes.
- e) If the ACB is off-hover (i.e., during power failure), will the ATs and tugs have enough power to maneuver the ACB, accounting for ice friction? (11/5/08 memo)

3) Soil Erosion

Juneau State Land Plan Chapter 2 Upland and Waterfront Development policy H, Soil Erosion, states: “Soil erosion caused by development projects will be minimized by restricting the removal of vegetation adjacent to water bodies and by stabilizing disturbed soil as soon as possible.”

- a) How does the applicant intend to comply with this policy with the proposed clearing at the north end of Canyon Island?
- b) At the completion of operations, how does the applicant plan to rehabilitate the area impacted area at the north end of Canyon Island?
 - i) Will you conduct re-vegetation and soil stabilization?
 - ii) Will you monitor its success? For how long?

4) Canyon Island Fuel

- a) How will the ATs stored on Canyon Island obtain fuel?
- b) Will fuel be stored at Canyon Island?
- c) If so, how will fuel be protected from spilling during jökulhlaups?

5) Canyon Island Terrain

- a) Will the shoreland or inland route along the east side of Canyon Island require re-contouring to accommodate the ACB and tow vehicles?
- b) Please explain how barge operations will avoid changes to the east Canyon Island hydrologic regime, such as altering natural drainage or river flow patterns.
 - i) Will the ATs create rutting on the shoreland substrate? If so, how deep and how will the rutting be managed to avoid alteration of natural hydrologic processes?
- c) For the upland site on the east side of Canyon Island what level and what extent of clearing of the vegetation will be required for the ATV's and trail?
 - i) Will stumps remain or will they require removing and grading?
- d) Is there any merchantable timber that will need to be removed?
- e) What do you plan to do with vegetation that is removed?

6) Monitoring

DNR is concerned about anticipated groundings in the plan of operations and possible adverse impacts on the substrate and traditional public access during both operating seasons.

- a) Will the monitor participate in each voyage?
- b) Will the monitor be required to know the conditions of each permit and have authority to ensure their compliance?
- c) Will the monitor have authority to report significant non-compliance events immediately (within 12-24 hours)?

- d) Is the applicant willing to provide interim weekly or bi-weekly monitoring reports during the first year of operations that summarizes conditions, issues encountered (including all groundings and substrate disturbances) and their resolution?
- e) What measures will be taken if the operation comes upon an un-manned vessel (e.g., boat at anchor) and the operation is unable to maneuver around it?

The monitoring site maps (Appendix A) to the monitoring plan shows Transition Season Alternate Routes.

- f) Please explain the “transition season” and its anticipated range of dates.
- g) Also, it appears Map 12 is mirror imaged with the summer route in the wrong location.

7) Bonding/Financial Assurance

Please provide an Alaska registered engineer’s estimate for removing a fully loaded non-operating ACB and two non-operating ATs from Canyon Island. By regulation, 11 AAC 96.060, a performance guaranty must be secured in an amount that at least covers the cost of restoring the site to its original condition. This amount may include the amount of deductible on liability insurance.

8) Southeast Alaska Petroleum Resource Organization (SEAPRO) Membership

- a) Does the applicant intend to become a member of SEAPRO?
- b) Will river-capable spill response equipment continuously be located on the ACB and/or the tow equipment?
- c) Will transportation team employees be required to take Spill Response Team Member Training?
- d) What special procedures do you intend to implement for responding to river spills as opposed to ocean spills?
- e) What measures, training and equipment will you require for responding to non-petroleum spills?

9) Insurance

DNR requires liability and other appropriate insurance as a condition on its land use authorizations. DNR may consult with the State of Alaska Risk Management Office regarding required liability for this operation.

- a) How does the applicant intend to meet the following requirements?

Standard permit condition #27 states:

“Insurance. Permittee shall:

- a) Consult, as appropriate, with an insurance professional licensed to transact the business of insurance under Alaska Statute Title 21, to determine what types and levels of insurance are adequate to protect Permittee and Permitter (the State, its officers, agents and employees) relative to the liability exposure of Permittee's commercial operations.
- b) Secure or purchase, at Permittee's own expense, and maintain in full force at all times during the term of the permit, adequate insurance policies and coverage levels recommended by an insurance professional licensed to transact the business of insurance under Alaska Statute Title 21, and acceptable to the State of Alaska. The State will expect, at a minimum, the following types of coverage:

Commercial General Liability Insurance: The policy shall be written on an "occurrence" form, and shall not be written as a "claims-made" form unless specifically reviewed and agreed to by the Division of Risk Management, Alaska Department of Administration.

Workers' Compensation Insurance: Permittee shall provide and maintain, for all its employees, Workers' Compensation Insurance as required by AS 23.30.045. Where applicable, coverage must comply with any other statutory obligations, whether State or federal, in which employees are engaged in work on the permitted premises. The insurance policy must contain a waiver of subrogation clause in favor of the State of Alaska.

- c) Ensure that the State of Alaska, Department of Natural Resources is included as an additional insured on all liability policies held by Permittee that provide coverage for liabilities connected to the operations of Permittee on or in conjunction with the permitted premises, referred to as _____.
- d) Provide proof of insurance to the Regional Manager on a yearly basis. The certificate must provide for a 30-day prior notice to the State of Alaska in the event of cancellation, nonrenewal or material change of conditions. Failure to furnish satisfactory evidence of insurance, or lapse of the policy are material breaches of the permit and shall be grounds for termination of the permit at State's option. Generally, the State of Alaska will rely upon the best professional judgment of the licensed insurance agent and, at renewal, the agent's annual re-assessment of the insured's liability exposure for the determination of adequate levels of coverage. The State of Alaska reserves the right to require additional coverage if, in its discretion, it determines such coverage may be warranted. Any changes to the approved permit development and operations plan, or the existence of significant claims against the liability coverage, would warrant State examination of the insurance to determine its adequacy.
- e) Notify within 20 days, and provide documentation and full disclosure to the Regional Manager, in the event that Permittee becomes aware of a claim against any of its liability coverage.